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## The intervention of online teaching practicum to teachers' sense of self-efficacy

### Çevrimiçi Öğretim Uygulamasının Öğretmenlerin Öz-Yeterlik Anlayışına Müdahalesi

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#### Abstract

The purpose of this explanatory mixed method study was to investigate the effect of Online Based (OB) and Field Based (FB) teaching practicum experience on student teacher (ST)s' sense of self efficacy levels in instructional strategies, student engagement and classroom management within the Faculty of Education at a private university in Erbil, Iraq. An explanatory mixed method was designed with two treatment groups. Both groups were administrated the Teacher Sense of Self-Efficacy Scale (TSES) theorized by Tschannen-Moran and Hoy (1998) . Since the results of the survey was different from what is being expected, a semi structured interview was held with a ST from each department. Results from the t-test demonstrated that the OB group (OBG) students demonstrated a very high-level sense of self-efficacy in terms of instructional strategies, student engagement and classroom management. However, after the interview it was figured out that the FB group (FBG) students improved their self-efficacy in the authentic school environment. This study demonstrated the importance of continuous, appropriate and authentic challenges in eventually establishing a stable sense of self-efficacy among student teachers.

**Key Words:** COVID-19, field based, online, self-efficacy, teaching practicum.

#### Introduction

The coronavirus (COVID-19) outbreak has disturbed the education in Kurdistan Region of Iraq (KRI) as it has happened in many countries. With the COVID-19 pandemic taking over the world, education institutions on the global are having to close their doors and the governments

#### Öz

Bu açıklayıcı karma yöntem çalışmasının amacı, Çevrimiçi Temelli (OB) ve Alan Temelli (FB) öğretim uygulama deneyiminin, öğretmen adayının (ST) öğretim stratejilerinde, öğrenci katılımında ve sınıf yönetiminde öz yeterlik duygusu düzeylerine etkisini araştırmaktır. Her iki gruba da Tschannen-Moran, Hoy ve Hoy (1998) tarafından kuramlaştırılan Öğretmen Öz-Yeterlik Duygusu Ölçeği (TSES) uygulanmıştır. Anket sonuçları beklenenden farklı olduğu için her departmandan bir öğrenci ile yarı yapılandırılmış bir görüşme yapıldı. T-testinin sonuçları, çevrim içi grubu (OBG) öğrencilerinin öğretim stratejileri, öğrenci katılımı ve sınıf yönetimi açısından çok yüksek düzeyde bir öz yeterlik duygusu sergilediğini göstermiştir. Ancak görüşmeden sonra alan temelli (FBG) öğrencilerinin otantik okul ortamında öz yeterliklerini geliştirdikleri anlaşıldı. Bu çalışma, öğretmen adayları arasında kararlı bir öz yeterlik duygusu oluşturmada, sürekli, uygun ve otantik zorlukların önemini göstermiştir.

**Anahtar Kelimeler:** COVID-19, alan temelli, çevrimiçi, öz yeterlik, öğretim pratiği.

are calling the students to stay at home. As an alternative way of learning, Education institutions including the universities started to use online education platforms launching e-learning classes which enable the college student to complete assignments, deliver presentations

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and take quizzes, in return those college students would get feedback from their lecturers. Due to the lock down, the theoretical courses and the actual teaching practicum experiences in the authentic school settings have been shifted to online platforms with the help of e-supervisors at the entire Faculty of Education at a leading private university in KRI. Student teachers (STs) could not pursue the teaching practicum and could not complete their real-life tasks in the actual classroom settings which caused a lack of self-efficacy on their teaching profession. In order to achieve the same outcomes of the actual teaching practicum classroom settings, virtual classrooms and online teaching practicum platform were established and each of the STs demonstrated a micro teaching to their peers and their supervisors through an online education platform. After each microteaching a detailed feedback from their peers and from their supervisors were provided to the STs. The supervisors of each STs have provided e-mentoring about their micro teaching and all other aspects of an effective teacher. However, at the end of the interviews it was figured out that the STs did not find the e-practicum effective enough as much as the actual classroom settings in terms self-efficacy. Field research show that there is a close correlation between the teaching practicum and teachers' sense of self efficacy. On the other hand, with the COVID-19 outbreak, online education became an important component of instruction all over the world and plays an important role in achieving the goals and outcomes of the curriculum. Despite its easiness and some advantages, online education, specifically e-practicum, is associated with a number of problems. Therefore, this research will be an initial study regarding to the e-practicum and STs self-efficacy. The aim of this research is to examine the effectiveness of online teaching practicum and school-based teaching practicum experience on STs' self-efficacy levels at one Teacher Education Program prior to teaching at the K-12 schools.

### Research questions

Are there any significant differences between online teaching practicum and school-based teaching practicum on the STs' self-efficacy level?

Is online teaching practicum experience as effective as school-based teaching practicum on STs' self-efficacy levels in terms of classroom management, instructional strategies and student engagement?

How did online teaching practicum and school-based teaching practicum experience intervention affect STs' self-efficacy in classroom management, instructional strategies and student engagement prior to teaching at the K-12 schools?

### Literature Review

Self-efficacy is the academic motivation hinges on the STs' beliefs that they can succeed at school tasks. Self-efficacy is grounded in the theoretical framework of social cognitive theory emphasizing the involvement and exercise of human agency that people can exercise some influence over what they do. Bandura (1997) the originator of self-efficacy theory, and Heppner, M. J., & O'Brien (1994), have defined the self-efficacy as an individual's judgement of his capability to organize and execute the courses of actions required to attain desired outcomes. Self-efficacy has a great effect on thoughts and emotions that enable all kinds of course tasks. Evidence from a plenty of experimental research oriented by Bandura's construct of self-efficacy have shown that self-efficacy is one of the most important factors of success in a wide range of contexts, including teaching which is referred to as teacher self-efficacy (Bandura 1986, 1989). Teacher self-efficacy is defined as "*the teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context*" (Tschannen-Moran and Hoy, 2001; Tschannen-Moran, Hoy, and Hoy, 1998, p.233). Social Cognitive theorists (Klassen and Durksen, 2014; Lawson et al, 2015; Tjeerdsma, 2016; Tschannen-Moran and Hoy, 2001; Tuchman and Isaacs, 2011) postulated several sources of information such as *enactive mastery experiences, observational experiences, persuasive communication and evaluative feedback*, and emotional and physiological arousal that learners use to make judgements about self-efficacy (Palmer, 2006); (Schunk, 1987); (Berg and Smith 2018; McKim and Velez, 2017) (Tschannen-Moran and Hoy, 2001).

Many researches have been conducted worldwide investigating the possible situational and instructional factors within educational contexts affecting student teachers' self-efficacy (Van Dinther, Dochy, and Segers, 2011) for the last three decades (Becker, Waldis, and Staub, 2019; Berg and Smith, 2018; Milner and Hoy 2003; Tavi, 2014; Tjeerdsma, 2016; Tschannen-Moran et al, 1998; Zhu, Mena, and Johnson, 2020). The common findings of these research

are that authentic school-based teacher education programs significantly provide those sources of efficacy and enhance STs' sense of self efficacy and preparedness for teaching. Data from these researches also have identified the school-based teacher education programs, teaching practicum in our case, can increase STs' self-efficacy in instructional strategies, student engagement, and classroom management; as a result, that help the STs to improve academic performance and teacher collegiality. (Gurvitch and Metzler, 2009; McDonnough and Matkins, 2010; Milner and Hoy, 2003; Skaalvik and Skaalvik, 2007; Tschannen-Moran and Hoy, 2001; Tschannen-Moran et al, 1998; Ulvik and Smith, 2011). According to Hascher and Hagenauer (2016), teaching practicum is highly effective in developing the STs' teaching competencies and self-efficacy. Hence, school-based teaching practicum is one of the most important keystones of Faculties of Teacher Education (Tjeerdsma, 2016) which provides a realistic setting and supports apprentices to teach (Wang, 2001) for teacher candidates to participate in meaningful teaching for learning experiences (Celik, 2019). Berg and Smith (2018) yielded that teacher education is to develop student teachers' (STs) professional competence including values, pedagogical knowledge, dispositions, content knowledge and self-efficacy. Thus, STs are expected to develop theoretical and reflective capacities as well as practical skills and knowledge during the field experience and actual classroom practicum experiences. A teaching practicum in the authentic school settings help STs to fill the gap between theory and practice (Zhu et al, 2020). According to Tavil (2014), pedagogical courses given in the textbooks and field experience in the teaching practicum throughout the teacher education play a crucial role in the professional development of student teachers, and on their thoughts and beliefs about their self-efficacy (Zee and Koomen, 2016). Becker et al, (2019) stated that actual classroom settings throughout the teaching practicum enable STs to reflect on teaching in various classroom situations and from multiple perspectives that develop the self-efficacy. In addition, field-based teaching practicum can be a high-stake experience for STs, particularly those on the edge of their new careers. STs on teaching practicum have chances to observe and participate in their the actual classroom activities and other teacher tasks in the field as they take part in the authentic education settings. STs can involve the wider aspects of the teaching community through the meetings, discussions, appropriateness of the dress codes, norms of behaviors, beliefs, values and attitudes of the

students in the teaching profession. Thus, the STs can adjust themselves to the existing school culture and teaching/learning environment (Kagan, 1992).

With regard to the abovementioned research findings which point out the mediating role of field based teaching practicum in relation to STs' self-efficacy in instructional strategies student engagement, and classroom management, it is important for teacher education programs to focus on the field-based teaching practicum in terms of STs self-efficacy development (Gurvitch and Metzler, 2009). Although studies have recognized the importance of field-based teaching practicum, research has yet to systematically investigate the effect of the online teaching practicum experience.

Plenty of research have been conducted to show the effectiveness of the online teaching and learning in the education context from the mid-1990s' (Carl and Strydom, 2017; Dorner and Kumar 2016; Mitchell and Delgado, 2014; Paris, Boston, and Morris, 2015). In an online teaching practicum, the STs are physically distant, however they must participate in a cohort that shares the learning goals. STs may be in anywhere that the internet is accessible, and those students can attend the online classes as free of time and cost of travel. However, teaching practicum experience is a practical requirement of teacher education curriculum. Practical experiences are vital for the STs' integration of teaching skills, theory and critical thinking process into the teaching practicum. The actual authentic education environments are important bridges to successful experiences for STs. Authentic context of the workplace is the crucial atmosphere where the STs can demonstrated their learning, teaching skills and readiness for the teaching profession. Simulations or virtual practices cannot be a substitute for practical experiences in terms of gaining self-efficacy in the teaching professional. Besides, especially in the developing countries, STs can have many technical problems to access the internet. They might not access the internet; they might live locally, or they might not have electricity. Even some students do not have any device to access internet or to follow the online practicum experiences. Despite a growing body of research focusing on the school-based teaching practicum, the effectiveness of online teaching practicum on STs self-efficacy beliefs haven't yet been sufficiently researched with experimental designs.

## Methodology

To answer the research questions a sequential explanatory mixed method (Tashakkori, Teddlie, 1998), a procedure of collecting, analyzing and integrating both quantitative and qualitative data during the research process within a single study (Creswell, & Clark, 2017), was used. The reason of mixing both types of data was neither the quantitative or the qualitative methods were effective by themselves to express the details of the effectiveness and differences of the Field-Based and Online-Based teaching practicum experience. The quantitative and qualitative approach provided a better understanding of research problems then either approach alone (Creswell & Clark, 2017).

## Participants

The participants in this study were STs who had been graduated in spring semester 2019 and 2020. There were 50 STs from Biology, English Language Teaching, Physics and Mathematics Education Department graduated in spring semester 2019 academic year at a leading private university in Kurdistan Region of Iraq. All those 50 students did their teaching practicum experience at the authentic school environment for 16 weeks. During 2019-2020, in the pandemic outbreak, 47 undergraduate teacher candidates from four different teaching departments were involved in the online teaching practicum experience. The participants in this study were not identified as control group or/ and experimental group, instead they were labeled as School-Based Groups (SBG) and Online Based Groups (OBC).

**Table 1.**

*Components of online teaching practicum and field-based teaching practicum designs.*

| Teaching Materials | Online teaching practicum       | Field-based teaching practicum |
|--------------------|---------------------------------|--------------------------------|
| Number of lessons  | 7-9                             | 4-6                            |
| Location           | Through online                  | Public schools                 |
| Length             | 18-20 minutes                   | 35-40 minutes                  |
| Students           | Class peers                     | School students                |
| Class size         | 20-24                           | 25-30                          |
| Content            | Selected by the students        | Selected by the mentor         |
| Equipment          | Online teaching platform (Zoom) | School supply                  |

## Quantitative Phase

### Data Collection

For the first quantitative phase *Teachers' Sense of Efficacy Scale (TSES)* developed, theorized, and validated by Tschannen-Moran and Hoy (2001), was used to measure the STs efficacy in Student Engagement, Instructional Practices, and Classroom Management. The survey items were formed 9 point- Likert types scales. As it was recommended by the authors the full 24-item scale was administered because the factor structure is less distinct for the respondent. The scale is considered a reliable and valid instrument (overall .94, engagement .87, instruction .91 and management .90) ranking from 1 (nothing) – 9 (a great deal).

### Procedure:

Subjects in this study completed the Teachers' Sense of Efficacy Scale, developed by Tschannen-Moran & Woolfolk (2001). The researcher intended to measure the Self Efficacy in Student Engagement, Instructional Practices, and Classroom Management of the Faculty of Education graduates of 2019 who had completed their practicum at the authentic school environment. With this aim the researcher, with the help of the Head of Departments and supervisors, distributed the hard copy of the scale to the teacher candidates at the end of their teaching practicum sessions in June 2019. The data collection process took one week between June 6 and June 13, 2019. One week after distributing the survey to the 89 STs, 50 respondents returned their survey back to either researcher or the Head of Departments.

### Data Analysis

A quasi experimental design was used in this study with two levels of treatment (OBG and FBG), and there was no control group. The researcher calculated the descriptive measures, such as frequencies, means and standard deviations to summarize the survey data, a univariate analysis was used. Self-efficacy level in online and field-based teaching practicum was displayed in a cross tabulation that demonstrated mean and standard deviations of the STs tested. A parametric Independent Samples t Test was used to compare the means of two independent groups treatment (OBG and FBG) in order to determine whether there was statistical evidence that the associated population means were significantly different. The significance level (also called alpha) value was set at 0.05( $p < .05$ ) for these analyses.

### Qualitative research design

After completing and analyzing the quantitative data collection, the researcher decided to explore in-depth of the phenomenon by getting the STs ideas about the Online teaching practicum and Field based teaching practicum. A one-on-one interview design was used to collect and analyze data in the second, qualitative, phase. A systematical case selection procedure was used in this second, qualitative, phase. the researcher, with the help of the Head of Departments, selected the best informant from each department- Biology, English Language Teaching, Physics and Mathematics education department- from the FBG and OBG. Four participants were involved from the FBG who graduated in spring semester 2019 and four participants from the OBG graduated in spring semester 2020, during the COVID-19 pandemic.

### Data Collection

The qualitative data was gathered from multiple sources to reach a deep understanding of each case. The data was collected through a) a face to face interview with the STs who had their teaching practicum experience through both in field and online platforms.

The content of the interview protocol was grounded on the quantitative results of the research. Because the aim of the qualitative phase was to explore the results of the quantitative statistical tests (Creswell, J. W., & Clark, 2017), the researcher wanted to understand why certain predictor variables differently contributed to the STs self-efficacy.

The interview questions aroused from the protocol done with the interviewees to explore and make sense the results of the quantitative data. An open-ended question:

- *Explain how Field Based/Online Based teaching practicum improve self-efficacy in Instructional Strategies, Student Engagement and Classroom Management.*

Was asked to the participants both in FBG and OBG to explore the self-efficacy level of Classroom Management, Instructional Design, and Students Engagement which showed statistically significant difference between the FBG and OBG. Additional questions were asked to further prompt answers to the interviewees who did not give a detailed information during the interview.

Each face to face interview was auto taped and transcribed. Besides written answers of the open-ended questions were gathered and uploaded to the NVIVO 12, qualitative data software for data storage, for coding and theme development.

### Findings

#### Quantitative Phase

Table 2 shows the mean scores and the standard deviations for the Students Engagements, Classroom management and Instructional Strategies for the Field based and Online based teaching practicum groups. On the TSES instrument, self-efficacy items were measured with a 9 Likert scale so that higher scores moving toward 9 shows stronger efficacy. As it is seen in Table 2, the groups statistics indicate that STs in the field based and online based teaching practicum did not demonstrate a significant difference in the Student Engagement [Student Engagement FBG ( $m$ )= 6.0225, OBG ( $m$ )= 6.305. ( $dif$ )= .2825].

The difference between these two groups in the Student Engagement is not significant and the results are so close to each other. In both groups, the STs demonstrated a self-efficacy in Student Engagement during their teaching practicum. The majority of the respondents in both groups positively rated their self-efficacy in the Student Engagement and agreed that they believe they can involve the student to the courses. Yet, still there were some students who did not have enough self-esteem in any kind of teaching skills.

On the other hand, the researcher and the Head of Departments were expecting that the FBG would



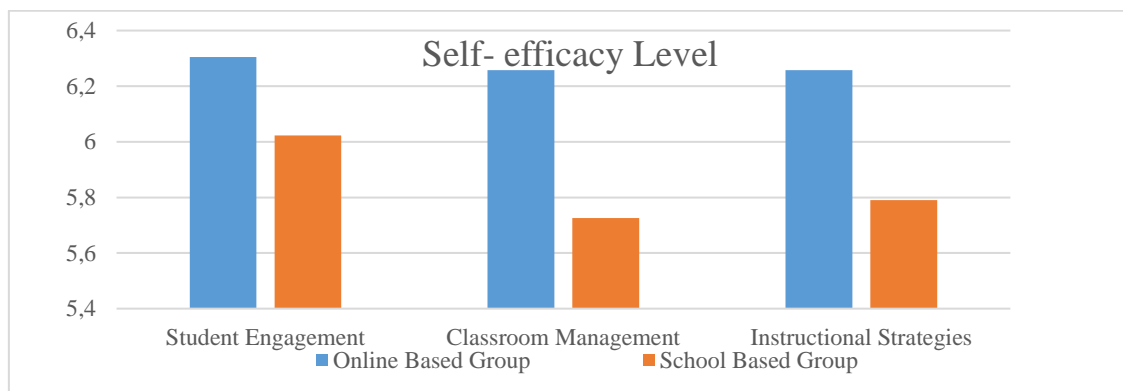
have more self-efficacy in the Classroom Management and Instructional Strategies skills, but the results of the survey showed an opposite direction. The means of those groups were significantly different from each other. According to the survey results, online teaching practicum experience helped the students to improve their self-efficacy level in Classroom

Management and Instructional Strategies. Across the FBG and OBG, the students in the OBG expressed that they have a high self- efficacy level. [ Classroom Management FBG, (m) = 5.7257, OBG (m)= 6.2571. (dif)= .5314, Instructional Strategies FBG (m)= 5.7900, OBG (m)= 6.3881. (dif)= .5981]

**Table 2.**

*Means and (SD) for FBG and OBG across Student Engagement, Classroom Management, and Instructional Strategies.*

|                          | Type         | N  | Mean   | Std. Deviation | Std. Error Mean |
|--------------------------|--------------|----|--------|----------------|-----------------|
| Student Engagement       | Field Based  | 50 | 6.0225 | 1.25323        | .17723          |
|                          | Online Based | 47 | 6.3051 | 1.29045        | .18823          |
| Classroom Management     | Field Based  | 50 | 5.7257 | 1.19413        | .16888          |
|                          | Online Based | 47 | 6.2571 | 1.27499        | .18598          |
| Instructional Strategies | Field Based  | 50 | 5.7900 | 1.26809        | .17934          |
|                          | Online Based | 47 | 6.3881 | 1.05710        | .15419          |



**Fig 1.** FBG and OBG self- efficacy level across Student Engagement, Classroom Management, and Instructional Strategies.

An Independent sample *t-test* was used to examine the differences between FBG and OBG at each self-efficacy dimensions. Those analyses have demonstrated a significant difference in Classroom Management [*sig.* = (0.37, *p* < .05)] and in Instructional Strategies [ *sig.* = (0.14, *p* < .05)]. Yet, regarding the Student Engagement, the results of those groups did not reveal a

significant difference. These results imply that STs in the OBG thought that they had a more self-efficacy mood in Classroom Management and in using different Instructional Strategies than the STs in the FBG. Keeping in mind that those STs have never visited or been any of the authentic educational settings and they really did not know and taste the real school atmosphere.

**Table 3.**  
*Independent Samples Test.*

|                             |                                   | Levene's Test<br>for Equality of<br>Variances |      | t-test for Equality of Means |        |                    |                    |                          |  |         |
|-----------------------------|-----------------------------------|---|------|------------------------------|--------|--------------------|--------------------|--------------------------|--|---------|
|                             |                                   | F   | Sig. | t                            | df     | Sig.<br>(2-tailed) | Mean<br>Difference | Std. Error<br>Difference | 95% Confidence<br>Interval of the Difference |         |
|                             |                                   |   |      |                              |        |                    |                    |                          | Lower  | Upper   |
| Student<br>Engagement       | Equal<br>variances<br>assumed     | .223  | .638 | -1.094                       | 95     | .277               | -.28259            | .25830                   | -.79539                                      | .23021  |
|                             | Equal<br>variances not<br>assumed |   |      | -1.093                       | 94.207 | .277               | -.28259            | .25854                   | -.79591                                      | .23073  |
| Classroom<br>Management     | Equal<br>variances<br>assumed     | .018  | .895 | -2.120                       | 95     | .037               | -.53143            | .25070                   | -1.02912                                     | -.03374 |
|                             | Equal<br>variances not<br>assumed |   |      | -2.115                       | 93.473 | .037               | -.53143            | .25121                   | -1.03025                                     | -.03261 |
| Instructional<br>Strategies | Equal<br>variances<br>assumed     | 1.018   | .316 | -2.515                       | 95     | .014               | -.59815            | .23784                   | -1.07033                                     | -.12596 |
|                             | Equal<br>variances not<br>assumed |   |      | -2.529                       | 93.687 | .013               | -.59815            | .23651                   | -1.06776                                     | -.12853 |

### Qualitative Phase

The analysis of each case across four cases from the FBG and OBG was based on three themes of authentic school-based teaching practicum experience and online based teaching practicum experiences: Classroom Management, Instructional Strategies and Student Engagement. The summary of the case descriptions are as follows.

#### *Classroom Management*

Confronting classroom management is an important problem even for most of the teachers that occurs in a daily teaching. Controlling the disruptive behaviors in the classroom, following the classroom rules, cheating, calming down noisy students, and establishing a trusting relationship with each groups of students are some of the most serious classroom management problems (Brookhart & Freeman, 1992; Curtis, 2017). Since the STs in the online based group haven't been in the real classroom environment, they couldn't realize the level of such kinds of problems through the online platforms just by knowing the theories of the management. The ST said that *'While I was having my micro teaching to my peers and my supervisors, I haven't had such kind of classroom management problems, because there were no real school students in my teaching'*. The absence of classroom management problems in online education has led STs to misinterpret that there will be few or no classroom management problems in the real classroom environment: *'After I started to teach in a public school, I faced with many disruptive*

*students who influenced the other students' attention persistently'*. They also figured out that the real classroom environment was very different from the online classroom atmosphere in terms of applying the classroom rules.

#### *Instructional strategies*

The online teaching practicum experience program did not positively affect the ST's self-esteem in using different types of teaching strategies. Those inexperienced STs who did not know how to apply alternative teaching strategies could not adjust their lessons to the proper level of individual students or they couldn't use a variety of instructional strategies. One of the STs from ELT department mentioned that *'it was always difficult to use different types of instructional strategies and I always had difficulties in presenting and structuring the new topics in different ways'*. They also acknowledged that when they first started to do lessons with real students in a real classroom environment, they made very novice mistakes and they could not apply the methods to eliminate these mistakes either because they were excited or did not come to their mind.

#### *Student Engagement*

Student engagement in the learning process is one of the key behaviors that refers to the amount of time students devote to learning in the classroom. Distinct from the amount of time the teacher devoted to teaching a topic, it is the time that the students are actively engaged in learning the material being taught. The STs in the Online

Based teaching practicum group had challenges in engaging the students to their lessons when they started to teach. The ST from the Biology Education Department yielded *"... it was the first time for me to be in the real classroom and I couldn't do much to get through to the most difficult students. I saw my student who were disengaged involved an emotional and mental detachment from my lessons. I was not able to help my students to think critically, because I just was in a panic. To tell the truth, I even couldn't recognize that I had many disengaged students."* In addition, when students were disengaged in far subtler ways, such as looking attentive while their thoughts are miles away, it was hard to motivate and bring back them to the lessons. ST from the English Language teacher mentioned that *"...I knew the theories of motivation and I knew the ways of promoting student engagement theoretically, but when I had classes with the disruptive students in the real classroom settings they all gone."* The STs admitted that this year was the trainee year and they had learnt many effective strategies to engage the students in the lesson.

### Field-based Group Interviewees

STs have spent lots of time with the real students in the authentic atmosphere which developed a quality interaction patterns of STs and students. Doing the teaching practicum in the real education setting helped the STs to improve their Classroom Management, Instructional Strategies and Student Engagement skills. The summary of the interviews across four cases are as follows.

#### Classroom Management

The STs who did their teaching practicum experience in the real school atmosphere gained a bit more experience than the ones in the online teaching practicum. When they faced any kinds of classroom management problems, they were guided and counselled by those mentor teachers and their supervisors. With the help of those counselors the STs learnt specific techniques for preventing disruptive behaviors from occurring and dealing with them efficiently. One of the STs from Biology Education Department mentioned that *"...this school-based teaching practicum experienced improved my self-esteem very much. Before facing the real atmosphere of a school, I was terrified to speak in front of people, especially students who are seeking the mistakes of the teachers. With the help of the mentor teacher and other teachers, I applied the theories of classroom management, using different*

*instructional strategies and I also found how to use different strategies to involve the students to the lessons."*

#### Instructional strategies

The STs in the field- based teaching experience group have learnt and practiced flexibility and variety in their instructional strategies by following and monitoring their experienced mentors during the class time. Those STs monitored a variety of teaching strategies that they can use to compose lesson plans and to create and maintain an atmosphere of interest and variety in their classroom. One of the STs mentioned that *" I have experienced how to clearly present goals and main points of the lesson; I have learnt the content sequentially and how to be clear and concrete. I also monitored how experienced mentor teacher check for the students' understanding. All these instructions gave me a self-efficacy to respond to difficult questions from my students, and to adjust my lessons to the proper level for individual student."* The field- based teaching practicum experience gave them a self-efficacy and comfort by seeing a real education community.

#### Students Engagement

Student engagement in the field-based teaching practicum experience was stimulating. Support from the mentor teachers and supervisors ranged from being insecure on teaching to self-esteemed to engage the most difficult students to the lessons. STs especially benefitted from monitoring how their mentor teachers motivate the students who show low interest in school work: *'identifying the most effective combination of learning materials and instructional strategies for each lesson, such as presentation, recitation, modeling, questioning and discussion attract the students' attention, even for the most difficult ones gave me a high self-esteem.'* says one of the STs from Biology Education Department. They also experienced *"...providing mental strategies"* to encourage their learners to become actively involved in the subject matter to restructure it based on the learners' own ways of thinking and prior understanding.

### Discussion

The results of this mixed-method study drew an attention to the importance of the teaching practicum experience in teacher education prior to the teaching at schools. Tschannen-Moran and Hoy (2001) proposed Teachers' Sense of



Efficacy which is the beliefs in their capability to make a difference in student learning, to be able to get through even to students who are difficult or unmotivated. In their study, The Teacher Sense of Efficacy Scale, ask teachers to assess their capability concerning instructional strategies, student engagement, and classroom management. The field-based teaching practicum has been identified as a very powerful source of experience in terms of achieving instruction, engagement and management.

### ***Online Based teaching Practicum***

The results of this study demonstrated that STs do not benefit from the field isolated and somewhat limited teaching situations (such as observations, tutoring, problem solving) as much as they would from more authentic teaching practice settings. Even if the STs were successful in their online teaching practicum experience, they failed in every lesson they taught, and they were discouraged when they were confronted with their first authentic education settings. This research also revealed that strong sense of efficacy level can be established throughout a sequence of authentic experiences over time, which provide opportunities to cope with the challenges occurring during the instruction, student engagement and classroom management. This result of this study is similar to those of Gurvitch and Metzler's study (2009) in which they compared the Laboratory-based instruction and field-based instruction. This mixed-method study also demonstrated that only after the STs face some challenging experience in the authentic education settings and turn out to themselves that they can be successful, can establish a stronger self-efficacy.

The respondent STs in the online based teaching group were asked to indicate whether online teaching practicum experience helped them to increase their self-efficacy level. The majority of the participants agreed that online teaching practicum was very effective to develop their instructional strategies, student engagement and classroom management skills. The OBG cohorts taught for the first time through online tools, they were provided a secured and minimally challenging teaching environment. This supportive teaching environment in their online teaching practicum experience may have led them to the unsophisticated expectations that teaching is relatively simple and easy in the authentic teaching settings, and they were able to perceive themselves as quite successful in doing it.

The most interesting finding was that the STs in the OBG cohort couldn't improve their sense self-efficacy level during the online teaching practicum process, they figured out this reality when they started to teach though. Those OBG students reported that after they start real teaching in the real school settings with real students, they have realized the significant difference between online teaching and teaching in the real atmosphere. They also commented that facing real life challenges in the schools destroyed their sense of self-efficacy they received during the online teaching practicum. Although online teaching tools are one of the fastest growing trends in the way in technology is being utilized in education (Means et al., 2009), the teaching practicum experience did not work through online platforms as in the teaching process. Only online teaching practicum did not build up the efficacy level of STs prior to their teaching. Since teachers' sense of self efficacy is directly related to student achievement (Beard et al., 2010) and those online cohort students did not meet any real students, they couldn't achieve a high level of sense of self efficacy as they thought during their practicum period.

Through semi-structured interview and reflections, the STs in the OBG in this study announced many problems regarding instructional strategies, student engagement and classroom management in the authentic environment. They began to seek solutions to those problems during their real teaching and most of the STs tried to implement different strategies awkwardly.

### ***Field Based teaching practicum***

The field-based teaching practicum provided the FBG teacher candidates with earlier and more frequent opportunities to practice teaching in highly authentic settings. These STs taught K-12 students in the real education sites at an earlier time prior to their teaching profession. In addition to using the practice schools' limited facilities and resources, they had to follow the schools' curriculum while teaching full-length lessons to entire class. The field-based instructional settings provided much more authentic challenges throughout their sequence of pre-student teaching field experiences in their program.

The FBG students' instruction strategies, student engagement and classroom management skills were weakened from the very beginning of their teaching in the actual school settings. A common view amongst survey participants was that

teaching is one of the most difficult professions and they lack sense of self-efficacy; thus, without a high-level self-efficacy belief teaching cannot be done. Teaching within the authentic public-school environments provided the STs with more regular and more challenging decisions and actions which increased the degree of difficulty within these teaching experiences. Challenging with these obstacles for the first time within these authentic teaching environments led the STs weakening the STs' sense of self efficacy.

Similar to Gurvitch and Metzler's (2009) study, results from this research show that the FBG teacher candidates eventually realized the benefit of early and regular teaching opportunities in authentic settings. Throughout the teaching practicum, with the help of supervisors and mentor teachers, the STs had additional chances to improve their instructional strategies, student engagement and classroom management skills within the authentic school environment. Although the STs face more obstacles in the realistic environment while teaching, once they met those challenges over time, their teaching skills in terms of instructional; strategies, student inclusion and classroom management strengthened significantly in their teaching profession after they start teaching.

This study proposed that teacher education programs should be based on not only what to do in the classroom, but also how to do it well and how to improve it. In their study Mitchell and Delgado (2014) indicated that field-based experiences are essential for the student's integration of skills, theory and critical thinking processes into professional practice. It is also significant to cope with the problems occurring in a classroom. Having the teaching practicum in the actual education settings would promote finding solutions by inspiring the feeling of altruism among STs in the field-based teaching practicum cohort. The levels observed in this investigation are far below those observed by who suggested that the STs teachers can maximize the value of their communications and language with each child and build a comfortable social environment to encourage all children's participation during online teaching practicum. Yet the STs found time to maximize their interactions only in the authentic school settings. Those who had their teaching practicum experience in online teaching cohort couldn't find any chances and opportunities to improve their interaction with the students.

### ***Online teaching practicum vs. Field-based teaching practicum***

The comparison between the online teaching practicum and field-based teaching practicum groups demonstrated a very interesting point. After those STs started their teaching practicum both in field and online cohort, the OBG STs indicated a very high level of self-efficacy while the FBG STs demonstrated a significant weakening in their teaching and as a result in their sense of self-efficacy. Being in an authentic school environment and saying online is likely the reason of this differences. The OBG teacher candidates taught through online teaching tools, they did not face the real challenging problems at the actual school environment, and they did not face any classroom management, or student engagement problems. Those STs completed their teaching practicum experience in much more controlled virtual settings, which may have led them to believe that teaching is not a very challenging task. Besides, under this controlled setting they achieved the teaching practicum experience with high grades. The less authentic but more unrealistic teaching environment created a false self-confidence among the STs in the OBG. However, the establishment of a strong and stable sense of self-efficacy needs more than a virtual teaching setting. In their interviews, the STs in the OBG mentioned that teaching through online platforms, in an unrealistic teaching environment increased their sense of self-efficacy until they started to teach in the actual school environment. This online teaching practicum experience misled them in understanding and improving the self-efficacy.

Teaching practicum Student Teachers in the FBG who taught different subjects in the actual school settings experienced some initial difficulties in teaching their subjects and as a result they demonstrated a low level of sense of self-efficacy in terms of classroom management, instructional strategies and student engagement. These initial real challenges in the authentic school environment have prevented the development of their self-efficacy and raised some doubts about their teaching abilities and teaching profession. As the time passed, the STs in the real teaching environment had more chances to practice teaching, solve real class problems and found more ways to engage their students to the lessons. These procedures helped the STs to increase their self-efficacy level in student engagement, classroom management and instructional strategies.

## Conclusions

This study was set out to critically examine which of the teaching practicum experience done through the online teaching platforms and in a real school atmosphere is more efficient for self-efficacy. One of the most significant findings of this investigation is that the Field based teaching practicum experience students had some challenges in the authentic school environment yet during their field based teaching experience they demonstrated an increase in their sense of self efficacy level prior to their teaching profession. These STs gained a mastery experience in terms of effective teaching performance in an authentic environment that contributed to improving of their efficacy regarding instructional strategies, student engagement and classroom management. The findings clearly indicate that student teachers' capabilities concerning instructional strategies, student engagement, and classroom management can be improved through experiences that allow authentic challenges to be offered and met.

The results of this investigation also show that although the online based teaching practicum student teachers demonstrated a significant higher self-efficacy level during online teaching practicum experience, their self-efficacy level was not as high as they think when they faced the difficulties in the real school environment. The increase of self-efficacy levels of those online based teaching practicum students was salient only when they were able to successfully meet the unique challenges of the teaching period in the real school settings. On the other hand, the FBG teachers encountered more authentic challenges early in their field-based teaching practicum, and were able over time to meet those challenges, which gradually strengthened their self-efficacy prior to their teaching profession.

These results are in accord with recent studies (Becker et al., 2019; Gurvitch & Metzler, 2009a; Hoy & Spero, 2005) indicating that teachers' sense of self-efficacy develop during the teacher education program and especially during the field- based teaching practicum experience.

These findings have significant implications for the understanding of how comparing to the online based teaching practicum, field-based teaching practicum experience can promote higher self-efficacy level in student engagement, instructional strategies and classroom management. Early intervention into the authentic school environment may cause slight difficulties, but once those difficulties are

confronted, teacher candidates may be reinforced prior to their teaching.

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